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PFIZER PIGMENTS INC.
A subsidiary of Pfizer Inc.
2001 Lynch Avenue, East St. Louis, Ill. 62205

August 5, 1987

Mr. Larry Eastep, Manager
Land Pollution Control Division
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, IL 62706

Dear Mr. Eastep:

As a result of recent changes in the regulations defining solid waste and recycled materials, Pfizer believes that our East St. Louis iron oxide production facility (which uses spent pickle liquor from steel operations (K062) as a substitute for virgin acid) is no longer classified as a hazardous waste treatment site under the RCRA regulations. The pupose of this letter is to affirm our understanding of the regulations.

On July 13, 1987, our Mr. Jeff Carlton spoke with Mr. Rob Watson of your office regarding the classification of Pfizer's East St. Louis facility as a hazardous waste storage/treatment site. Mr. Watson suggested that we send a letter to your attention explaining our situation.

In a letter dated September 18, 1986, Mr. Eugene Theios (Manager of the Disposal Alternatives Unit of your Division) stated that Pfizer has the option of using spent pickle liquor directly, without reclamation, in which case it is no longer a solid waste.

Pfizer wishes to verify Mr. Theios' September 18, 1986 letter and further clarify the status of our facility.

Pfizer Pigments Inc. manufactures a variety of iron oxide and natural barium sulfate products at the East St. Louis location. The iron oxide products are used primarily as raw materials in the coatings and magnetic tape industries. The basic iron oxide production process for both the pigments and magnetics products is illustrated in the attached diagram and described below.

NEUTRALIZATION

The production of iron oxide products begins with the neutralization step, in which scrap iron is dissolved in an acid source (sulfuric acid or hydrochloric acid). This process takes place in large heated reactor tanks called neutralizers. The acid is "neutralized" by the scrap iron, resulting in

either a ferrous sulfate solution (when the iron reacts with the sulfuric acid source) or a ferrous chloride solution (when a hydrochloric acid source is used). The reaction continues until the pH of the solution exceeds 4.0. In order to assure that the quality of the final products remains consistent, only scrap iron and virgin acids or spent pickle liquor (K062) which do not contain significant amounts of tin, chromium, zinc, and other metals are used. The presence of these materials in the succeeding manufacturing steps would produce off-quality final products. Therefore, our raw materials (the scrap metal and the acid sources) are routinely analyzed to ensure that they do not contain excessive levels of these compounds.

CLARIFICATION

After neutralization, the ferrous chloride or sulfate solution is transferred into clarification tanks. Here, the solids that are suspended in the solution settle out. These solids are caused by various impurities from both the scrap iron and acid sources, such as sand, dirt, etc.

The settled solids are transferred to our wastewater treatment operation. Here, lime is added to increase the pH of the total wastestream to 7 - 8. Next, the neutralized wastewater is pumped to a clarifier, where the solids settle out. The solids are dewatered on a rotary vacuum filter and then hauled to a landfill as a special, non-hazardous industrial waste. The effluent from the clarifiers goes to the American Bottoms Regional Wastewater Treatment Plant in Sauget. The wastes generated by the production of the iron oxide products are the same regardless of whether spent pickle liquor (K062) or virgin acid is used in the neutralizing operation.

REMAINDER OF PROCESS

After the solids are removed from the ferrous sulfate and chloride solutions, the solutions are pumped to storage tanks. Next, the iron oxide is precipitated using either scrap iron, ammonia or sodium hydroxide. The insoluble iron oxide product is then settled, washed on vacuum and pressure filters, dried, and packed for shipment to our customers.

USE OF SPENT PICKLE LIQUOR

Commercial grade hydrochloric and sulfuric acids can be used as the acid source in the neutralizing operation. However, spent pickle liquor (K062) generated by the steel industry has been used as a substitute for the commerical grade (virgin) acids for over 40 years. The neutralization, clarification, and wastewater treatment processes are the same regardless of whether virgin acid or spent pickle liquor is used.

Spent pickle liquor is used as a substitute for virgin acid for several reasons. First, it tends to generate less impurities from the scrap than virgin acid. In addition, the total reaction time in the neutralizers is reduced when spent pickle liquor is used, since the pickle liquor already contains significant amounts of either ferrous sulfate or ferrous chloride from the pickling operations at the steel mills. Finally, the cost of spent pickle liquor is usually lower than that of virgin acids.

The spent pickle liquor arrives at our facility by truck. Samples of each truckload of spent pickle liquor are analyzed to ensure that the liquor contains acceptably low levels of chrome, zinc, aluminum, and other contaminants.

The liquor is unloaded directly from the truck to storage tanks. The liquor is then transferred from the storage tanks to the neutralizers where the scrap iron is added and the reaction takes place. There is no pretreatment of the liquor prior to its use as a substitute for virgin acid in the neutralizing process.

CLASSIFICATION OF PFIZER AS A HAZARDOUS WASTE TREATMENT SITE

Spent pickle liquor from steel operations was among the materials included in the listed hazardous wastes (K062) when the Resource Conservation and Recovery Act was passed in 1976. Any facility involved in the neutralization or disposal of spent pickle liquor was therefore classified as a solid waste management site. Pfizer applied for and received the appropriate Federal and Illinois operating permit in order to continue using spent pickle liquor as a substitute for virgin acid (USEPA ID No. ILD 006 317 119 and ILEPA No. 1630450034).

However, in order to encourage the beneficial reuse of hazardous wastes, USEPA adopted new regulations in 1985 which amended the definition of solid wastes. Illinois adopted these same regulations shortly therefater. Specifically, IL ADM Title 35, Section 721.102, (e) (1) (B) states that "materials are not solid wastes when they can be shown to be recycled by being ... used or reused as effective substitutes for commercial products".

Pfizer maintains that our use of spent pickle liquor as a substitute for commercial grade hydrochloric and sulfuric acids, without pretreatment, falls under the definition of recycle rather than the definition of hazardous waste disposal. We understand this revised definition to mean that our operations no longer are classified as a solid waste management facility and that our operations are no longer subject to RCRA Subtitle C regulations.

In actuality, this will not change the procedure currently in effect in our production operations. We will continue to inspect and maintain our storage and neutralizing systems to minimize the chance for failure. We will continue to train our employees to properly handle acidic materials (whether spent pickle liquor or virgin acids) and to know how to respond to emergencies. We will continue to keep a record of the amount of pickle liquor received and used at our facility (one pickle liquor supplier has requested that we continue to use manifests to track their shipments even though the liquor will no longer be defined as a solid waste). Finally, we will continue to work with IEPA to ensure that all of our operations comply with applicable regulations.

Pfizer requests that IEPA affirm our understanding of the regulations that the E. St. Louis facility is not subject to the RCRA regulations in the use of steel mill pickle liquor (K062).

Please note that much of the information contained in this letter is of a proprietary nature and should be treated as confidential information. This information could be very useful to a competitor.

Please contact our Mr. Jeff Carlton if you have any questions or comments regarding this information.

Sincerely,

Roger E. Rader
Plant Manager

Attachment

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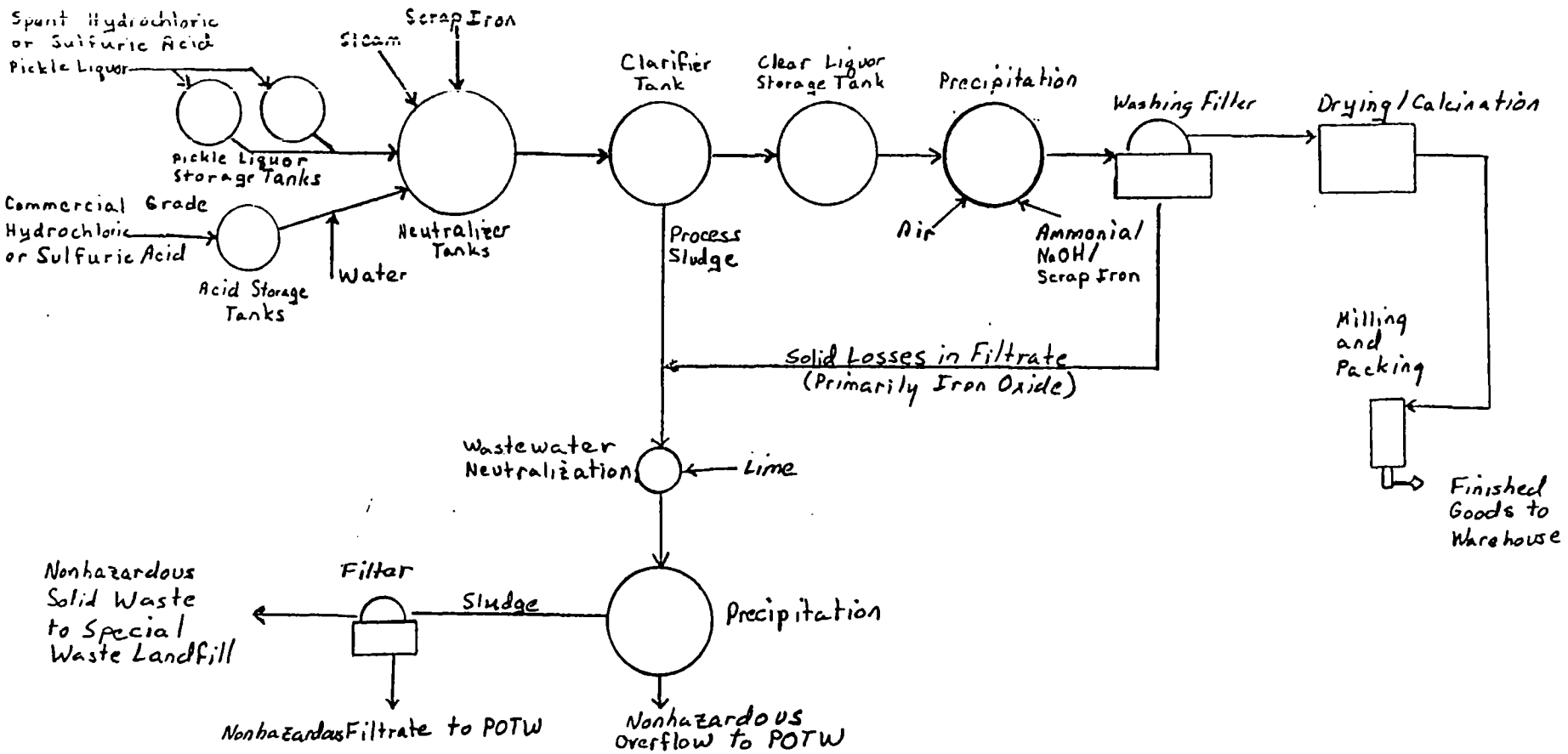
BCC: J. Carlton
G. Gray
W. McCoy
M. Richardson

IRON OXIDE PRODUCTION



Note: Commercial grade acids are used in Neutralizer Tanks when Spent Pickle Liquor is not economically available.

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JCC
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